

REMARKS

The present application contains claims 1-7, 10-16, 31-46, and 48-56.

Rejection under 35 U.S.C §102

The Office rejected claims 1-7, 10-16, 31-43, 47-50, 51, 53, and 55 under 35 U.S.C. §102 (e) as being anticipated by Murphy et al., (U.S. Patent No. 6,628,754), hereinafter referred to as Murphy.

Applicants respectfully traverse the rejection to the extent such rejection may be considered applicable to the amended claims.

The present claimed invention is directed to a method, an apparatus and a storage medium readable by a computer, for retrieving channel characteristics of a DSL channel. The method comprises the steps of determining and storing on a per bin basis channel a frequency response measurement and a noise measurement measured at a first end of the DSL channel at initialization; determining and storing on a per bin basis a signal-to-noise measurement measured at the first end of the DSL channel at initialization; and transmitting the channel frequency response measurement, the noise measurement and the signal-to-noise measurement from the first end to a second end of the DSL channel.

Murphy discusses the exchange of "transmitter settings" between the modem and the ATU, the modem 26 determines the frequency response of the customer loop 22. *See* Column 6, lines 1 to 16 and column 13, lines 38 to 61 of Murphy. For example, Murphy at column 6, lines 4 to 6 states that the transmitter settings are "the number of bits and relative power levels that are to be used on each DMT subcarrier".

Applicants respectfully submit that the transmitter settings exchanged by Murphy are different from the measurements transmitted by the Applicants. The Applicants' embodiments transmit the frequency response measurement, the noise measurement and the SNR measurement because these data are used to diagnose customer loop problems. *See* paragraph 29, 45, 46 and 51 of the present published application 20020176544. Transmitter settings are not adequate for accurate diagnosis of loop problems.

Murphy sends the settings for configuring the CO end ATU and the CPE end modem for optimal transmission. The present disclosure is concerned with the problem of how to diagnose customer

loop problems, see paragraph 27, line 4 and paragraph 29, line 9 of the present published application 20020176544; while Murphy provides no suggestion on how to diagnose customer loop problems, no suggestion that the frequency response measurement, noise measurement and SNR measurement be communicated to the other end. In Murphy, these measurements are processed locally to arrive at transmitter settings which are then communicated to the other end.

In order to properly anticipate Applicants' claimed invention under 35 U.S.C. §102, each and every element of the claimed invention must be found, either expressly described or under principles of inherency, in a single prior art reference. Murphy fails to meet this requirement, and provides no teaching that would have suggested the desirability of modification to include such elements. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in ... the claim." See M.P.E.P. §2131 (8th Ed., Rev. 3, Aug. 2005), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126,1236, 9 U.S.P.Q. 2d 191 3, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." § 2131 (8th Ed., 2005), p. 2100-76.

Applicants respectfully submit that the other rejections to the dependent claims do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicants acquiescing to any of the purported teachings or assertions made regarding the cited art or the pending application.

Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §102(e).

Rejections under 35 U.S.C. 103 (a)

The Office rejected claims 48, 50, 54, and 56 under 35 U.S.C. 103 (a) as being unpatentable over Murphy in view of McFarland (U.S. Patent No. 6,628,673), hereinafter referred to as McFarland.

The Office further rejected claims 44-46 under 35 U.S.C. 103 (a) as being unpatentable over Murphy in view of Zuranski (U.S. Patent No. 6,263,077), hereinafter referred to as Zuranski.

As discussed above, Murphy does not teach or suggest the transmission of the measurements to the other end.

McFarland or Zuranski does not overcome the deficiencies of Murphy.

McFarland teaches a communication system for transmitting continuously on one or just a few of the system's frequency sub-channels. In McFarland, simple low data rate nodes are allowed to use a small number of sub-channels while more complicated nodes use the remainder, and preferably functionality is provided to ensure that adjacent sub-channels are reliably spaced apart in frequency.

The analyzer of Zuranski is used "to obtain co-efficients for a preequalization filter" at the transmitter, not for "analyzing time dependent changes in cross talk levels and line attenuation" as claimed by the present invention.

Furthermore, there is no teaching or suggestion in the references or prior art in general that would lead one of skill in the art to combine the teachings of Murphy with McFarland or Zuranski.

Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §103(a).

The prior art made of record and not relied upon has been reviewed but is believed to be not relevant.

Applicants respectfully request reconsideration of this application, based on the foregoing amendments and remarks.

Respectfully submitted,



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